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FABRICATION AND TESTING OF GAS FILLED TARGETS FOR LARGE SCALED PLASMA EXPERIMENTS ON NOVA*

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Gas filled targets were required to study large scale plasma target conditions similar to the NIF point design - 1.0 E 21 electrons-cm^2 / 3 keV. The specifications and designs for the target from the Theoretical and Experimental Groups were translated into targets for Nova. The fabrication of a small volume (~ 10 mm^3) gas cells, with thin low Z windows, capable of holding >1 ATM was required. A gas manifold with a pressure transducer and that operated inside the Nova Target chamber vacuum was required and fabricated. Gas handling hardware for mixing and target filling will be described. Testing procedures for various target materials components will be described along with the material choices for various target components. A description of the fabrication process from target specification to delivery to Nova will be discussed.

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Oral session or poster session if deemed so by the committee.